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FOOD NEEDS FOR 1918.

AGRICULTURAL PROGRAM FOR THE PERIOD BEGINNING WITH THE AUTUMN OF 1917.

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AGRICULTURAL PROGRAM FOR THE PERIOD BEGINNING WITH THE AUTUMN OF 1917.

In suggesting an agricultural program on food crop production and conservation, beginning with the fall of 1917, it is not necessary to discuss at length the need for increased food in time of war. In fact, the war intensifies a shortage of food products which has been apparent for several years, though this country until recently has not felt the shortage. But now it has become real to the mass of consumers and critical to the welfare of the nation. But the problem is not as easy solved as stated. Many who are not directly interested in agriculture think chiefly of the importance of having an abundant food supply at the lowest prices. Producers of food, however, must consider the question from an economic standpoint, if they are to continue in their business, though they consider it also from a patriotic standpoint.

Since a state of war was declared by Congress, the Department of Agriculture has been called upon from all parts of the country and by all classes of people for advice and assistance in connection with the production, conservation, and marketing of farm products. In so far as production is concerned its advice as heretofore given, may be summarized very briefly in four statements:

(*a*) Each community should produce its own food and feed so far as practicable.

(*b*) Production of nonperishable staples should be increased beyond local needs in each locality in which they can be produced most profitably. These staples include wheat, rye, beans, and rice, oats, barley, sorghum, corn, and buckwheat being left for consideration in the spring of 1918.

(*c*) Sugar-beet and sugar-cane production should be increased in districts where factories are accessible and production conditions are favorable.

(*d*) Commercial production of perishables should be increased above normal only as the facilities for transportation and marketing are assured. The home vegetable garden should be encouraged to the extent of supplying as fully as possible the needs of the family growing it.

Obviously this advice is as sound for next year as it has been for this year, but more time has been available for the consideration of next year's problem and for that reason more detailed and more satisfactory advice can now be given.

A committee of department officers and experts has studied the food problem in consultation with specialists in the several States with a view to recommend to the producers of the Nation what they should now prepare to produce another year in order to care for the home and foreign demands for winter grain that this country should supply and desires to supply. This report is based upon their conclusions. From time to time, as conditions warrant, supplemental statements will be made concerning other crops, live stock and its products, feeds, seeds, fertilizers, etc.

SOUND CROP PRACTICES TO BE CONTINUED.

The agricultural industry is more complicated and more finely adjusted than is generally known. Definite crop rotations have been established in large areas of the country. Special crops and markets for them have been developed through the expenditure of long and patient effort, with the aid of an ample fertilizer supply and other favorable conditions. To assure the food supply of the immediate future, as well as the more remote future, many of the well-established agricultural practices should be carefully safeguarded for marked disturbance of them necessarily involves risk of dislocation of production and marketing activities which might result in material reduction of the total food supply. Without due regard to these considerations the producers of the United States might be persuaded to grow wheat to the neglect of other crops needed for the sustenance of the Nation and the maintenance of a prosperous agriculture.

OTHER CEREALS MUST SUPPLEMENT WHEAT.

With the supply of wheat below normal even in peace times, consumption of other cereals must be increased to satisfy necessities, and in order to make the future sure there must be a considerable increase in wheat. But the possibilities of production have a limit. The questions are: How large a gap is left when agriculture is stimulated to the highest point consistent with correct agricultural practice? And what supplementary cereals are available to stop this gap? Although considerable increase in the use of rye, barley, and rice can be developed, and a large increase in the use of oats also, the main burden must fall upon corn. With a known corn production, how much corn can be diverted from the feed of domesticated animals to food for human beings without injury, first, to the production of dairy products, and, second, to the production of pork and beef? Important relief may be obtained by the stimulation of production of fodder, including in this term roots, ensilage, legumes, concentrates, and roughage. This is indirectly as important as stimulation in the production of cereals designed directly for consumption by man. It is from this same point of view that the increased use of potatoes is important; the potato, both Irish and sweet, is a partial substitute for wheat in times of need.

REQUIREMENTS OF THE UNITED STATES AND THE ALLIED AND NEUTRAL COUNTRIES OF EUROPE IN 1917-18, ESTIMATED.

To supply the estimated needs of the United States, of the allies, and in part of the neutral countries of Europe next year, it would be necessary to plant in the United States for 1918 about 48.7 million acres of winter wheat, 19 million acres of spring wheat, 5.6 million acres of rye, 7.9 million acres of barley, 45.2 million acres of oats, and 111.5 million acres of corn. Compared with the 10-year average, the proposed acreages represent increases of 43 per cent for winter wheat, 5 per cent spring wheat, 29 per cent all wheat, 124 per cent rye, 7 per cent barley, 22 per cent oats, and 7 per cent corn, or a total increase of 22 per cent over the 10-year average of these cereals combined. Compared with 1917, these acreages represent increases of 22 per cent for winter wheat, 15 per cent for all wheat, 51 per cent for rye, and 5 per cent for oats, and decreases of 6 per cent for barley and of 8 per cent for corn, or a net increase of 4.5 per cent over the total 1917 acreage of these cereals combined. With the food requirements of the United States and the allied and neutral countries of Europe for next year in mind, the question of the acreage which it is advisable and practicable to plant demands serious thought.

MANY FACTORS CONSIDERED.

The recommendations as to areas to be sown allow for numerous contingencies, including the uncertainties of weather, farm labor supply, commercial fertilizer supply, extent of damage from plant diseases and insect pests, production of cereals in allied and neutral countries of Europe, as well as other countries which normally produce a surplus for export, transportation facilities, losses in trans-ocean shipment, imports and exports of food products into and from the United States, changes in per capita consumption, changes in utilization of grain for different purposes, and substitution of a surplus of one cereal for a shortage of another.

RECOMMENDATIONS FOR INCREASED PRODUCTION OF FOOD CROPS.

In considering the acreage problem for the crop year 1917–1918, with special reference to the seeding of winter wheat, rye, and oats this fall, the existing conditions with regard to transportation, seeds, fertilizer, and farm machinery have been kept in mind.

WINTER WHEAT.

The program as originally worked out by the Federal Department of Agriculture called for 44,634,000 acres of winter wheat to be sown this fall. When the respective proposed State acreages were presented to the authorities of the States in which wheat and rye are important crops a further increase was considered possible and desirable by them. As a consequence the recommendation for the sowing of 47,337,000 acres of winter wheat and 5,131,000 acres of winter rye is made.

On the basis of the average yield for the past 10 years, the planting of approximately 47,337,000 acres of winter wheat will give a total production of 672,000,000 bushels, which will exceed all previous winter-wheat crops harvested in the United States with the exception of the crops of 1914 and 1915, when the acreages harvested and yields per acre were both above normal. Assuming this increase in plantings, if the extremely favorable conditions under which the winter-wheat crop of 1914 was grown are repeated, the yield of winter wheat next year will be 880,000,000 bushels, or by far the largest winter-wheat crop ever produced, and even larger than the total of both winter and spring wheat crops for all past years except two. The figures quoted above are based upon a winter killing of 9 per cent, and yields of 15.6 bushels for winter wheat, the averages for the past 10 years, and a yield per acre of 19 bushels, which was the yield in 1914.

PRINCIPAL INCREASES IN WINTER WHEAT PRODUCTION.

The principal increases in acreage of winter wheat are recommended in the areas where the acreages devoted to that cereal are already large and farmers are accustoned to growing wheat and are equipped with machinery for producing and harvesting the crop. Most of these increases are recommended for the areas where the production of oats and corn also is heavy, since much wheat can be sown to advantage on oat stubble and in the standing corn or on ground from which the corn crop has been removed for the silo or cut for fodder. In some districts the increase in the acreage could be made larger, but this has seemed inadvisable for fear of disorganizing crop rotations, with injury to crops in succeeding years. In sections where potatoes and beans are commonly grown, it is often possible to sow wheat with a minimum amount of labor, as no plowing is required after such crops. Detailed recommendations of acreages to be planted in each State are given in the accompanying table.

Winter wheat acreages recommended for 1917–18.

(000 omitted.)

State.	Acreage suggested for fall of 1917.	Acreage sown in fall of 1916.	Per cent of increase over 1916.	Maximum acreage sown in any year since 1906.	State.	Acreage suggested for fall of 1917.	Acreage sown in fall of 1916.	Per cent of increase over 1916.	Maximum acreage sown in any year since 1906.
Alabama	200	133	50	133	Nevada	25	22	14	23
Arizona	43	37	16	43	New Hampshire	....	....	....	....
Arkansas	308	225	37	265	New Jersey	110	94	17	112
California	509	413	20	1,669	New Mexico	100	94	6	94
Colorado	440	420	5	420	New York	520	441	18	478
Connecticut	....	....	....	....	North Carolina	1,180	1,053	12	1,053
Delaware	150	136	10	136	North Dakota	....	....	....	....
Florida	....	....	....	....	Ohio	3,000	1,879	60	2,340
Georgia	786	393	100	393	Oklahoma	4,040	3,232	25	3,232
Idaho	405	346	17	405	Oregon	708	472	50	692
Illinois	2,934	2,362	24	2,934	Pennsylvania	1,659	1,457	14	1,659
Iowa	525	451	16	525	Rhode Island	....	....	....	....
Indiana	2,800	2,256	25	2,820	South Carolina	325	238	37	328
Kansas	10,000	8,910	12	8,958	South Dakota	182	182	0	182
Kentucky	1,000	884	13	968	Tennessee	1,080	900	20	901
Louisiana	....	....	....	....	Texas	1,830	1,695	8	1,730
Maine	....	....	....	....	Utah	275	246	12	256
Maryland	760	692	10	797	Vermont	....	....	....	....
Massachusetts	....	....	....	....	Virginia	1,670	1,455	15	1,455
Michigan	1,059	896	20	1,059	Washington	850	754	13	1,271
Minnesota	95	87	10	87	West Virginia	380	340	12	380
Mississippi	100	18	455	18	Wisconsin	130	101	29	103
Missouri	2,400	2,277	5	2,859	Wyoming	85	79	8	79
Montana	1,000	775	29	775					
Nebraska	3,674	3,645	1	3,674	United States	47,337	40,090	18	45,306

Since the acreages sown last fall are fresh in the memory of farmers, the sowings suggested for this year are compared with those of 1916. For Kansas, where more than one-fifth of the winter wheat of the country was sown in 1916, and a campaign for an increase already is under way, an increase of more than a million acres, or one-seventh of the total increase, is recommended. Ohio is asked for one and one-tenth million acres over last year's sowings. This is considered possible and desirable by the agricultural leaders of the State. Because of available land in the State, Oklahoma is asked to increase the acreage one-fourth, amounting to more than 800,000 acres. Indiana and Illinois are each asked to increase their acreages by somewhat more than a half million acres, thereby equaling what they have sown in the recent past. Oregon, because of the abnormally low acreage sown last fall, is asked to increase the acreage this fall by one-quarter million acres, or 50 per cent. These six States, Kansas, Ohio, Oklahoma, Indiana, Illinois, and Oregon, in which nearly one-half of the winter wheat was sown last fall, are asked to furnish considerably more than one-half of the increase planned for this fall. Their agricultural leaders think it is possible and are taking the necessary steps to see that it is done.

The largest percentage increases are requested in some of the Southern States. The increase in actual acres, however, is comparatively small in each of these cases. Mississippi leads with 455 per cent increase and Georgia comes next with 100 per cent increase. Alabama is asked for 50 per cent increase; Arkansas for 37 per cent; and South Carolina for 37 per cent. These Southern States are anxious to increase their acreages by these amounts to safeguard their own food supply.

In the cotton belt generally more of the small grains should be sown this fall. In some sections there is a choice of wheat, oats, and rye. Recent experience with winter oats indicates that it is not a reliable crop in some parts of the South. Many farmers therefore will sow wheat or rye instead. Wheat is fairly well adapted to the Piedmont and mountainous sections. It is less well adapted to lower lying clay lands and is not suited to the sandy lands making up the area known as the Coastal Plain. For these sandy lands the rye crop is better adapted than wheat and is more hardy than oats. It is a bread grain that can be substituted for wheat. Rye is also a fair feed. It is believed that people in the Coastal Plain should sow a largely increased rye acreage this year, using the native rye varieties known by the names of South Georgia, Florida, Black-seeded, and perhaps by other local names, and also using the Abruzzez variety, which has been recently introduced and which is proving very satisfactory to the cotton belt.

Wisconsin, another State in which the present wheat acreage is small, is asked to increase the sowings 29 per cent, as wheat is well adapted to newly opened northern land and as present prices make it a profitable crop in that State. Montana is asked to put in an even million acres, an increase of nearly 30 per cent. But this is not a large total for the entire State, in view of its large acreage of unused land suitable for wheat.

The following States are asked to increase their acreages 16 to 20 per cent over those sown in the fall of 1916: New York, New Jersey, Michigan, Iowa, Tennessee, Arizona, Idaho, and California. The following States are asked to increase their 1916 acreages by 11 to 15 per cent: Pennsylvania, Virginia, West Virginia, North Carolina, Kansas, Kentucky, Utah, Nevada, and Washington. The following States are asked to increase their 1916 acreages by 6 to 10 per cent: Delaware, Maryland, Minnesota, Texas, Wyoming, and New Mexico. The States of Missouri and Colorado are each asked for a 5 per cent increase, while practically the same acreages as sown last fall are asked for in Nebraska and South Dakota. The excessive winter killing in Nebraska and the consequent lack of seed wheat make the situation for wheat growers very difficult this year in that State, but every effort is being made to equal and increase if possible the acreage of last year.

Most of the States for which only small percentage increases are suggested recently increased largely their wheat acreages, and already are growing about as much as is consistent with a well-balanced agriculture.

SPRING WHEAT.

It is too early to determine the area which should be sown to wheat next spring, but if this is equal to that sown in the spring of 1917, or 19 million acres, and the yield is up to the average of the last 10 years, a crop of 251 million bushels of spring wheat will be harvested, and if the yield per acre should equal that obtained in 1915 the crop will be 350 million bushels, the same as the greatest spring wheat crop ever produced. Thus, with no increase or decrease in the spring-wheat acreage, but with the 18 per cent increase over the 1916 winter-wheat sowings planned for this fall, the total wheat crop next year will be more than one billion bushels if the crop meets with slightly better than 10-year average conditions. With extremely favorable conditions, such as were experienced by the winter-wheat crop in 1914 and the spring-wheat crop in 1915, the total yield would amount to one and one-quarter billion bushels. A 10 per cent increase in spring-wheat acreage, with favorable growing conditions, would add another 30,000,000 bushels. The figures are based upon a winter killing of 9 per cent and yields per acre of 15.6 bushels for winter wheat and 13.2 bushels for spring wheat, the averages for the last 10 years, and yields per acre in 1914 of 19 bushels of winter wheat and 18.4 bushels of spring wheat in 1915.

For the present no recommendation is made as to the acreage to be sown to spring wheat next year. However, close watch will be kept of the winter-wheat crop and definite recommendations regarding acreage will be made in ample time for spring-wheat sowing. After the yield of corn and grain sorghums this year has been determined and the acreage of winter wheat is known, and after it has been determined how wheat has survived the coming winter, and therefore what the probable yield will be, definite recommendations will be made as to the acreage necessary to be planted to spring wheat. Seed of good weight and free from disease should be reserved for a considerably increased acreage of spring wheat.

RYE.

It is recommended that there be sown in the United States this fall 5,131,000 acres of rye, which, on the basis of the 10-year average, will yield 83,635,000 bushels. This is an increase of 917,000 acres, or 22 per cent over that sown last year, when the largest acreage in the history of the country was put in. The acreage recommended is an increase of 48 per cent over the 1915 acreage and of 57 per cent over the five-year (1912–1916) average sown acreage.

In any consideration of the expansion of the acreage of bread grains in certain parts of the country, it is necessary to consider wheat and rye together. This is because rye can be planted safely on many fields with less risk than wheat. Further, rye can be used as a substitute for wheat as a bread grain by those who are accustomed to it. Rye succeeds on poorer soils and with less fertilizer and in colder climates than wheat, and for these reasons should be planted in preference to wheat where it has been proved a safer crop. The farmer who, because of an attractive price for wheat, may be tempted to plant wheat rather than rye in a locality where rye is the more certain crop, takes a speculative risk of loss through winter killing and destructive wheat diseases which is unwarranted. There is every reason to expect that the price of rye for the next year will bear a satisfactory relation to that of wheat, and therefore justify the planting of rye where the present experience with it indicates its superiority. Detailed recommendations for an increase in acreage to be planted to rye this fall over that of 1917 are found in the accompanying table.

Rye acreage recommended for 1917–18.

(000 omitted.)

State.	Acreage suggested for fall of 1917.	Acreage sown fall of 1916.	Increase over fall of 1916.	State.	Acreage suggested for fall of 1917.	Acreage sown fall of 1916.	Increase over fall of 1916.
			Per cent.				*Per cent.*
Alabama	16	8	100	Nevada	...	...	...
Arizona	...	...	...	New Hampshire	1	...	...
Arkansas	1	1	0	New Jersey	120	78	54
California	12	12	0	New Mexico	...	...	...
Colorado	30	30	0	New York	170	162	5
Connecticut	16	8	100	North Carolina	67	86	[1] 22
Delaware	3	1	100	North Dakota	1,036	936	11
Florida	...	...	...	Ohio	84	84	0
Georgia	100	17	488	Oklahoma	15	10	50
Idaho	3	3	0	Oregon	45	32	41
Illinois	75	52	44	Pennsylvania	350	280	25
Iowa	116	58	100	Rhode Island	1	...	...
Indiana	275	205	35	South Carolina	50	7	614
Kansas	100	84	19	South Dakota	350	344	2
Kentucky	33	33	0	Tennessee	50	31	61
Louisiana	8	...	...	Texas	2	2	0
Maine	1	...	...	Utah	12	12	0
Maryland	35	29	21	Vermont	2	1	100
Massachusetts	6	3	100	Virginia	110	96	15
Michigan	454	378	20	Washington	10	6	67
Minnesota	460	385	19	West Virginia	28	23	22
Mississippi	...	...	...	Wisconsin	535	446	20
Missouri	40	29	38	Wyoming	30	16	87
Montana	30	11	173				
Nebraska	250	217	13	United States	5,131	4,214	21.8

[1] Decrease.

Fall-sown rye should supplement spring wheat to a considerable extent in the spring-wheat belt. An enlarged acreage of rye in addition to the usual spring-wheat sowings will help to guarantee a plentiful supply of bread grains next year. A disaster such as that which was caused by the combined effect of rust in the spring-wheat belt in 1916 and winter killing in the winter-wheat belt last winter is thereby at least partially insured against. It is recommended, therefore, that the acreage of rye be increased this year in the spring-wheat sections over that sown in the fall of 1916 by about 100,000 acres in North Dakota, 75,000 acres in Minnesota, 89,000 acres in Wisconsin, and 6,000 acres in South Dakota.

Rye should be sown more generally on the sandy lands along the Lakes in Michigan, Illinois, Indiana, Ohio, and New York, and in New Jersey; therefore an increase of 76,000 acres is recommended for Michigan, 72,000 for Indiana, and 42,000 for New Jersey. Rye also should take the place of many of the old pasture and hay lands of New York, Pennsylvania, and the New England States. Rye is a safer crop than winter wheat for such lands. Pennsylvania has much land more suitable for rye than for wheat, so an increase of 70,000 acres is suggested for that State. New York is asked for only 8,000 acres increase, but it is thought that a larger increase in rye may be possible in that State.

Some increases over the 1916 sowings are asked for in the cotton belt. It is estimated that last fall there was sown in the cotton belt about 100,000 acres of rye. It seems advisable to recommend that at least 250,000 acres of rye should be sown in this region this year, replacing some of the winter-oat acreage. In parts of the cotton belt a choice can be made this fall between rye and winter oats for sowing, especially on sandy lands.

The States in the corn belt are asked also to enlarge considerably their rye acreage over that sown in 1916, as the lighter soils which are not especially well adapted for wheat could be planted to advantage to rye.

WINTER OATS.

Winter oats should be sown in the South to the extent of available seed of adapted varieties. As desirable seed is limited in quantity, rye should be used to take the place of oats where these can not be sown.

SPRING-PLANTED CEREALS (CORN, SPRING OATS, SPRING BARLEY, RICE, GRAIN SORGHUMS, AND BUCKWHEAT).

No recommendations are made as to the acreage of these grains to be planted next spring, except to note that there is every indication at this time that the present acreage should be maintained. After the acreage of winter wheat is known and after it has been determined how this has survived the coming winter, and, therefore, what the probable yield will be, definite recommendations will be made as to the necessary acreage of these crops.

BEANS, SOY BEANS, COWPEAS, AND PEANUTS.

The situation regarding these crops also is such that practically no recommendation can be made at this time other than that adequate supplies of good seed be reserved from the crop now growing. The enlarged acreage of beans, 1,550,000 acres in the five leading States this year, which is an increase of 84 per cent over last year's acreage, and 2,000,000 acres of peanuts, which is an increase of 60 per cent over last year, should result in a large increase of these crops. Whether the maintenance or increase of these acreages in 1918 will be advisable can not be determined until after this year's crops are harvested and disposed of.

HAY AND OTHER FORAGE CROPS.

FALL-SEEDED HAY CROPS.

Farmers in the corn and hay and pasture regions should seed as much grass as will provide an acreage of hay at least equal to that of the present season. In order that the supply of grain for live stock may be conserved, it is essential that an adequate quantity of hay be insured. The acreage of hay and pasture should be maintained or slightly increased above that now existing. Otherwise the stimulation that high prices have given to the grain crops will tend seriously to reduce the acreage of hay as well as of pastures.

In portions of the corn belt large acreages of alfalfa were killed by the severe winter conditions of 1916–17. A partial replacement of acreage has been made as the result of last spring's seeding, but further recovery should be made by seeding this autumn when feasible and also next spring. The value of alfalfa hay as a partial substitute for grain in feeding live stock makes it highly desirable that an acreage as large as that of 1916 be maintained in the western portion of the corn belt, and farther east, where alfalfa is adapted, a substantial increase in acreage should be made at the expense of other forage crops.

FIELD PEAS, COWPEAS, SOY BEANS, VELVET BEANS, AND OTHER SPRING-PLANTED FORAGE CROPS.

The forage crops of field peas, cowpeas, soy beans, and velvet beans are sufficiently large to insure an ample supply of seed, and the acreages of these crops can be increased materially next spring if necessary. As regards the acreage of other forage crops to be planted in the spring of 1918, this will depend entirely on the status of the hay crop of the present season. Normally the acreage of such spring crops next year should be about the same as that of this year, but if for any reason there is an actual shortage of hay produced this season, much can be done toward increasing the acreage of forage to be planted next spring.

FERTILIZER STOCKS ARE LOW.

A shortage exists in many of the important fertilizer ingredients and the prices of practically all ingredients are high. The demands last spring for fertilizer were unusually large and the reserve stock now carried by the fertilizer companies and the stock intended for the fall trade have been seriously depleted.

While the present supply of potash is very low, high prices are stimulating development from many new sources. Ten thousand tons of potash (K_2O) were produced in this country last year and this amount probably will be increased during the current year. Most of the fertilizer companies will sell brands this fall containing 1, 2, and even 3 per cent of potash.

In regard to acid phosphate, the supply is short and the price high, because of the sulphuric-acid situation and the transportation difficulties. In normal times most of our sulphuric acid is produced from Spanish pyrites. The importation of these has practically ceased in recent months because of the submarine activity and the difficulty in securing vessels to carry the ore. Efforts are being made to remedy this situation, but even if an adequate supply of pyrites is secured, the price may be high because of the high freight rates. This, in turn, means high-priced acid phosphate.

Nitrogenous materials also are high in price and difficult to obtain. The demand of the munition makers for sodium nitrate and the high freight rates from Chile to the United States have caused the price of sodium nitrate to advance substantially 100 per cent. Cottonseed meal and high-grade tankage are being used in increasingly large quantities for cattle and hog feed. Despite a largely increased production capacity in by-product coke ovens, there is little or no evidence of a corresponding increase in the amount of ammonium sulphate available for fertilizers. Apparently the by-product ammonia is being used direct for other purposes, and the price of ammonium sulphate has advanced very sharply.

The Interstate Commerce Commission through the car efficiency committee of the American Railroad Association has called upon the fertilizer manufacturers to use their utmost endeavor to ship their products in maximum carload lots of 30,000 to 40,000 pounds rather than in the minimum carload lots of 15,000 pounds which sometimes heretofore have been used. The fertilizer companies apparently are endeavoring to respond to this demand of the commission.

NEED OF HUSBANDING SEED STOCKS.

Abnormally high prices of seed this year and, in some cases, an actual shortage, were important factors in limiting the acreage planted to certain crops. The seed supply of the country plays such an important part in crop production that every reasonable effort should be made to insure an adequate supply for planting this autumn and next spring, and furthermore to assist in bringing about a satisfactory distribution so that local shortages may be reduced to the minimum· Farmers can render effective aid by saving their own seed so far as practicable. By this method the production of acclimated seed is insured and the use of improved and pedigreed strains which have been produced and tested by the department and by State experiment stations would be increased greatly.

In order that sufficient seed may be available to farmers the department, State colleges, State boards of defense, and other State and local agencies should cooperate in locating surpluses and shortages. Surplus supplies of seed which are suitable for use in other localities often are available for sections where shortages exist. These inequalities in supply should be adjusted by the farmers reporting their needs and supplies to the county agents or other local officials, who in turn should report them to the proper State organization. Large surpluses and shortages should be reported to the Committee on Seed Stocks of the United States Department of Agriculture, which is in a position to act as a clearing house for information with regard to the needs of States or large sections of the country. In certain States fields of growing grain have been inspected by county agents or by representatives of the State colleges, and fields of suitable varieties free from mixtures and diseases have been registered. After the grain is harvested and thrashed these stocks will be held for sale to farmers who are in need of seed. County and other local agencies can be of material aid to farmers in financing the purchase of seed either by extending credit or by purchasing in carload lots for local distribution. By purchasing seed in carload lots quicker transportation is obtained.

Farmers or others who have seed suitable for planting should not yield to the temptation to sell for other purposes with the expectation of buying seeds later.

The importation of seed from abroad is a factor which can not be estimated definitely at this time. The present high prices have stimulated importations of cheaper and, in some cases, inferior seed. The department will consider this matter carefully and the farmers will be informed fully with regard to the value of imported seed offered to them as stock for seeding, in comparison with the value of domestic-grown stocks.

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